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Message: **Examiner Valentine**

Current Claim Set per your request.
Claims 54, 55, 57, 60, 63 and 64 were added in a Second Preliminary Amendment filed on 9/20/99

Claims 53, 56, 59 and 62 were last amended in an Amendment filed with an RCE on 8/8/02

Claims 58 and 61 were last amended in an Amendment filed 3/6/03

53. A process for generating electricity utilizing an integral, power generator comprising a compression stage, a turbine stage, and an electricity generation stage, the process comprising the steps of:

(a) compressing an oxygen-containing gas in the compression stage;

(b) heating at least some of the compressed gas in a heating stage;

(c) introducing fuel and the compressed heated gas into an electrochemical converter for oxidizing the fuel therein to produce electricity, said electrochemical converter also producing hot exhaust gas;

(d) driving the turbine stage with a turbine drive gas comprising electrochemical converter exhaust gas, the turbine stage driving the electricity generation stage and the compression stage, the generation stage generating electricity; and

(e) withdrawing spent electrochemical converter exhaust gas and introducing the spent gas into the heating stage for heating the compressed oxygen-containing gas.

54. The process of claim 53, wherein said electrochemical converter produces steam, and wherein the step of introducing the steam into the heating stage comprises introducing steam produced by said electrochemical converter.

55. The process of claim 53, wherein the turbine drive gas comprises sufficient compressed oxygen-containing gas that the turbine drive gas has a temperature compatible with the turbine stage so as to prevent damage thereto.

56. The process of claim 55, wherein said electrochemical converter operates at a higher temperature than does the turbine stage.

57. The process of claim 53, wherein said electrochemical converter operates at a higher temperature than does the turbine stage.

58. The process of claim 53, further comprising the step of disposing the compression stage and the electricity generation stage all on a single shaft.

59. A system for generating electricity comprising:

(a) an integral, power generator comprising a compressor, an electricity generator, and a turbine stage, the compressor having a gas inlet for introducing an oxygen-containing gas into the compressor to generate a compressed oxygen-containing gas;

(b) a heating stage for heating at least some of the compressed oxygen-containing gas;

(c) a fuel cell for converting a fuel, in the presence of an oxygen source, into electrical energy, the fuel cell having a gas inlet for receiving heated compressed oxygen-containing gas from the heating stage for use in the fuel cell as the oxygen source, the fuel cell also producing a hot exhaust gas; and

(d) wherein the turbine stage has an inlet for turbine drive gas comprising fuel cell exhaust gas so that the turbine stage drives the generator and the compressor, the generator generating electricity, and wherein the turbine stage has an outlet for hot spent drive gas.

60. The system of claim 59, further comprising means for withdrawing said exhaust gas from said fuel cell and introducing said exhaust gas into the heating stage for heating the compressed oxygen-containing gas.

61. The system of claim 59, further comprising the step of providing the compressor, electricity generator and turbine all on a single shaft.

62. A process for generating electricity utilizing an integral, power generator comprising a compression stage, a turbine stage, and an electricity generation stage, all on the same shaft, the process comprising the steps of:

(a) compressing an oxygen-containing gas in the compression stage;

(b) heating at least some of the compressed gas in a heating stage;

(c) introducing fuel and the compressed heated gas into an electrochemical converter for oxidizing the fuel therein to produce electricity, said electrochemical converter also producing hot exhaust gas; and

(d) driving the turbine stage with a turbine drive gas comprising electrochemical converter exhaust gas, the turbine stage driving the electricity

generation stage and the compression stage, the generation stage generating electricity.

63. The process of claim 62, further comprising the step of withdrawing spent electrochemical converter exhaust gas and introducing the spent gas into the heating stage for heating the compressed oxygen-containing gas.

64. The process of claim 62, wherein said electrochemical converter form part of said electricity generation stage.